

Claims after this response:

1. (Previously Presented) A method for creating a protocol dependent control path within an instrument system to allow a first client to communicate with the instrument system, the method comprising a first protocol comprising:

causing the instrument system to identify the first client, wherein the first client is configured to invoke ~~an~~ a first instrument application that is part of the instrument system and that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a first client specific protocol, and wherein the first instrument application is configured to communicate with clients using a first instrument application specific protocol;

causing the instrument system to identify the first instrument application with which the first client is configured to communicate;

causing the instrument system to identify the first client specific protocol;

causing the instrument system to identify the first instrument application specific protocol; and

causing the instrument system to automatically create a control path between the first client and the first instrument application, the control path communicating with the first client using the first client specific protocol and communicating with the first instrument application using the first application specific protocol.

2. (Previously Presented) the method as recited in claim 1, further comprising:

causing the instrument system to record the identification of the first client;

causing the instrument system to record the identification of the first instrument application;

causing the instrument system to record the identification of the first client specific protocol; and

causing the instrument system to record the identification of the first instrument application specific protocol.

3. (Previously Presented) The method as recited in claim 1, wherein first instrument application specific protocol differs from the first client specific protocol.

4. (Previously Presented) The method as recited in claim 1, further comprising:

repeating the first protocol for the first client and a second application, wherein the second application is configured to communicate using a second application specific protocol and wherein the second application specific protocol differs from first instrument application specific protocol.

5. (Previously Presented) The method as recited in claim 1, further comprising:

repeating the first protocol for a second client and the first instrument application, wherein the second client is configured to communicate using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

6. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the first protocol for a second client and a second application, wherein the second client is configured to communicate using a second client specific protocol, wherein the second application is configured to

communicate using a second instrument application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

7. (Currently Amended) The method as recited in claim 6, wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

8. (Currently Amended) A computer readable memory device embodying a computer program, the program causing a computer within an instrument system to:

cause the instrument system to obtain identification of a client, wherein the ~~first~~ client is configured to invoke an instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the ~~first~~ client is configured to communicate with the instrument system using a client specific protocol, and wherein the ~~first~~ instrument application communicates with clients using an application specific protocol;

cause the instrument system to identify the ~~first~~ instrument application;

cause the instrument system to identify the ~~first~~ client specific protocol;

cause the instrument system to identify the ~~first~~ instrument application specific protocol; and

automatically cause the instrument system to create a control path between the ~~first~~ client and ~~first~~ instrument application.

9. (Currently Amended) The computer readable memory as recited in claim 8, the computer program further causing the computer to:

cause the instrument system to record the identification of the ~~first~~ client;

cause the instrument system to record the identification of the ~~first~~-instrument application;

cause the instrument system to record the identification of the ~~first~~-client specific protocol, and

cause the instrument system to record the identification of the ~~first~~-instrument application specific protocol.

10. (Currently Amended) The computer readable memory as recited in claim 8, wherein the ~~first~~-instrument application specific protocol differs from the ~~first~~-client specific protocol.

11. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument system to identify a client, wherein the ~~first~~-client is configured to invoke an first-instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the ~~first~~-client is configured to communicate with the instrument system using a client specific protocol, and wherein the first instrument application communicates with clients using an first-application specific protocol;

cause the instrument system to identify the first instrument application;

cause the instrument system to identify the ~~first~~-client specific protocol;

cause the instrument system to identify the first instrument application specific protocol; and

automatically creating a control path between the ~~first~~ client and the first instrument application;

the instructions further comprising:

repeating the first set of instructions for the ~~first~~ client and a second application, wherein the second application is configured to communicate with clients using a second application specific protocol and wherein the second application specific protocol differs from the first instrument application specific protocol.

12. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument system to identify a first client, wherein the first client is configured to invoke an instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a first client specific protocol, and wherein the ~~first~~ instrument application communicates with clients using an application specific protocol;

cause the instrument system to identify the ~~first~~ instrument application;

cause the instrument system to identify the first client specific protocol;

cause the instrument system to identify the ~~first~~ instrument application specific protocol; and

automatically ~~creating~~ create a control path between the first client and the ~~first~~ instrument application;

the instructions further comprising:

repeating the first set of instructions for a second client and the ~~first~~ instrument application, wherein the second client is configured to communicate with the instrument system using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

13. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument system to identify a first client, wherein the first client is configured to invoke ~~an~~first instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a first client specific protocol, and wherein the first instrument application communicates with clients using ~~an~~first instrument application specific protocol;

cause the instrument system to identify the first instrument application;

cause the instrument system to identify the first client specific protocol;

cause the instrument system to identify the first instrument application specific protocol; and

automatically ~~creating~~create a control path between the first client and the first instrument application;

the instructions further comprising:

repeating the first set of instructions for a second client and a second application, wherein the second client is configured to communicate with the

instrument system using a second client specific protocol, wherein the second application is configured to communicate with clients using a second instrument application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

14. (Currently Amended) The computer readable memory as recited in claim 13, wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

15. (Currently Amended) A system comprising:

a management logic module configured to obtain identification of a first client, to obtain identification of ~~an~~first instrument application, to obtain identification of ~~the~~a first client specific protocol, to obtain identification of ~~the~~a first instrument application specific protocol, and to automatically create a control path between the first client and the first instrument application, wherein the first client is configured to invoke the first instrument application, wherein the first client is configured to communicate using a client specific protocol, wherein the first instrument application is configured to communicate using ~~an~~the first instrument application specific protocol, and wherein the first instrument application specific protocol differs from the first client specific protocol.

16. (Previously Presented) The system as recited in claim 15, wherein the control path comprises:

a communication logic module configured to receive communications from the first client which conform to the first client specific protocol, to translate such communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

17. (Previously Presented) The system as recited in claim 16, wherein the communication logic module comprises:

a server logic module configured to receive the communications from the first client; and

a translator logic module configured to receive the communications from the server logic module and to translate the received communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

18. (Previously Presented) The system as recited in claim 16, wherein the system further comprises:

wherein the first instrument application comprises a virtual instrument and an application component logic module and wherein the virtual instrument is configured to receive communications from the communication logic module and to perform any additional translation of the communications into communications to which the application component logic module is configured to understand and to which the application component logic module is configured to appropriately react, and to transfer such communications to the application component logic module.

19. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which an additional application is configured to understand and to which the additional application is configured to appropriately react,

and to transfer the translated additional communications to the additional application.

20. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which the application is configured to understand and to which the application is configured to appropriately react, and to transfer the translated additional communications to the application.